



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 CHICAGO REGIONAL LABORATORY
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605



Date: 1/30/2018
Subject: Review of Region 5 Data for U.S. Steel - Minntac Tailings Basin Area Facility
To: Water Division, WECA Region 5
77 West Jackson Boulevard
Chicago, IL 60604
From: Francis Awanya, Chemist
US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

X Francis A Awanya 1/31/2018

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: U.S. Steel - Minntac Tailings Basin Area Facility

/ /
Data Coordinator and Date Transmitted

Analyses included in this report:

Alkalinity



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591

Water Division, WECA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: U.S. Steel - Minntac Tailings Basin Area Facility
Project Number: 02DM17
Project Manager: Dean Maraldo

Reported:
Jan-30-18 17:16

Analysis Case Narrative

General Information

Sixteen (16) water samples collected for the project were received at the Chicago Regional Laboratory (CRL) on 09/14/2017. The samples were logged in the CRL LIMS for Total Alkalinity analysis on 09/15/2017 under Work Order Number 1709003. The samples were analyzed for Total Alkalinity using Standard Operating Procedure (SOP) CRL Document # AIG005 Version # 3 (Based on SM 2320B). The designated analyst for the samples is Francis Awanya. Francis can be reached at 312-886-3682. Other pertinent information is provided in the final analysis report. Analysis was completed within the holding time.

Sample Analysis and Results

The data reported herein meets the requirements of the CRL analytical SOP used for Total Alkalinity assay and the U.S. Steel – Minntac Basin Area Facility County Road 102 Mountain Iron, MN 55768 Quality Assurance Project Plan (QAPP), August 2017. The QAPP is archived in the CRL share drive with as "MN0057207_Minntac_QAPPSAMP_20170831.pdf".

Quality Control

All required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the CRL's QC limits or did not result in qualification of the data.



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ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1709003-01	Water	Sep-12-17 09:57	Sep-14-17 13:26
S02	1709003-02	Water	Sep-12-17 10:23	Sep-14-17 13:26
S03	1709003-03	Water	Sep-12-17 10:50	Sep-14-17 13:26
S04	1709003-04	Water	Sep-12-17 11:08	Sep-14-17 13:26
D05	1709003-05	Water	Sep-12-17 11:08	Sep-14-17 13:26
S06	1709003-06	Water	Sep-12-17 11:30	Sep-14-17 13:26
S07	1709003-07	Water	Sep-12-17 11:51	Sep-14-17 13:26
S08	1709003-08	Water	Sep-12-17 14:03	Sep-14-17 13:26
S09	1709003-09	Water	Sep-12-17 15:00	Sep-14-17 13:26
S10	1709003-10	Water	Sep-12-17 15:15	Sep-14-17 13:26
S11	1709003-11	Water	Sep-13-17 09:44	Sep-14-17 13:26
S12	1709003-12	Water	Sep-13-17 09:49	Sep-14-17 13:26
S13	1709003-13	Water	Sep-13-17 09:55	Sep-14-17 13:26
S14	1709003-14	Water	Sep-13-17 10:23	Sep-14-17 13:26
S15	1709003-15	Water	Sep-13-17 11:10	Sep-14-17 13:26
R16	1709003-16	Water	Sep-13-17 12:52	Sep-14-17 13:26



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Alkalinity by SM 2320B US EPA Region 5 Chicago Regional Laboratory

S01 (1709003-01) Matrix: Water Sampled: Sep-12-17 09:57 Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	480			20	mg CaCO ₃ /L	1	B17I022	Sep-19-17	Sep-19-17

S02 (1709003-02) Matrix: Water Sampled: Sep-12-17 10:23 Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	650			20	mg CaCO ₃ /L	1	B17I022	Sep-19-17	Sep-19-17

S03 (1709003-03) Matrix: Water Sampled: Sep-12-17 10:50 Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	610			20	mg CaCO ₃ /L	1	B17I022	Sep-19-17	Sep-19-17

S04 (1709003-04) Matrix: Water Sampled: Sep-12-17 11:08 Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	540			20	mg CaCO ₃ /L	1	B17I022	Sep-19-17	Sep-19-17

D05 (1709003-05) Matrix: Water Sampled: Sep-12-17 11:08 Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	550			20	mg CaCO ₃ /L	1	B17I022	Sep-19-17	Sep-19-17

S06 (1709003-06) Matrix: Water Sampled: Sep-12-17 11:30 Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	700			20	mg CaCO ₃ /L	1	B17I022	Sep-19-17	Sep-19-17

S07 (1709003-07) Matrix: Water Sampled: Sep-12-17 11:51 Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	710			20	mg CaCO ₃ /L	1	B17I022	Sep-19-17	Sep-19-17

S08 (1709003-08) Matrix: Water Sampled: Sep-12-17 14:03 Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	55			20	mg CaCO ₃ /L	1	B17I022	Sep-19-17	Sep-19-17



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Alkalinity by SM 2320B US EPA Region 5 Chicago Regional Laboratory

S09 (1709003-09)

Matrix: Water

Sampled: Sep-12-17 15:00

Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	380			20	mg CaCO3/L	1	B171022	Sep-19-17	Sep-19-17

S10 (1709003-10)

Matrix: Water

Sampled: Sep-12-17 15:15

Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	580			20	mg CaCO3/L	1	B171022	Sep-19-17	Sep-19-17

S11 (1709003-11)

Matrix: Water

Sampled: Sep-13-17 09:44

Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	470			20	mg CaCO3/L	1	B171022	Sep-19-17	Sep-19-17

S12 (1709003-12)

Matrix: Water

Sampled: Sep-13-17 09:49

Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	390			20	mg CaCO3/L	1	B171022	Sep-19-17	Sep-19-17

S13 (1709003-13)

Matrix: Water

Sampled: Sep-13-17 09:55

Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	470			20	mg CaCO3/L	1	B171022	Sep-19-17	Sep-19-17

S14 (1709003-14)

Matrix: Water

Sampled: Sep-13-17 10:23

Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	430			20	mg CaCO3/L	1	B171022	Sep-19-17	Sep-19-17

S15 (1709003-15)

Matrix: Water

Sampled: Sep-13-17 11:10

Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	600			20	mg CaCO3/L	1	B171022	Sep-19-17	Sep-19-17

R16 (1709003-16)

Matrix: Water

Sampled: Sep-13-17 12:52

Received: Sep-14-17 13:26

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Alkalinity	U			20	mg CaCO3/L	1	B171022	Sep-19-17	Sep-19-17



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Notes and Definitions

U Not Detected
NR Not Reported
Q QC limit Exceeded

